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MAR 25 1997

EX PARTE

March 25, 1997

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W. Room 222
Washington, D.C. 20554


RE: In the Matter of Federal-State Joint Board on Universal Service
CC Docket No. 96-45

Dear Mr. Caton:

Today, representatives of Sprint Corporation met with Ken McClure - Missouri Public Service Commission, Paul Pederson - Missouri Public Service Commission Staff, and, Martha Hogarty - Missouri Public Council to discuss the use of proxy cost models in the above referenced proceeding. Representing Sprint Corporation were: Richard Lawson and Jim Sichter. Attached is a copy of the materials used in the meeting.

Sprint requests that this information be made a part of the record in this matter. Two copies of this letter, in accordance with Section 1.1206(a)(1), are provided for this purpose. If you have any questions, please feel free to call.

Sincerely,


Jay C. Keithley

Attachment

No. of Copies rec'd 0+2
List ABCDE

Sprint Input Changes to BCPM

- Switching costs reduced
- 11.25% Cost of Capital
- Revised depreciation lives
 - switching - 12 years
 - circuit equipment - 10 years
 - copper plant - 18 years
- Structure sharing
 - 66% buried and manholes
 - 50% poles
- Copper and fiber material costs reduced 20%

Sprint Input Changes to BCPM

- Sprint specific costs for
 - digital loop carrier (DLC)
 - feeder distribution interfaces
- Fiber/Copper economic breakpoint charged to 15,000 ft.
- Copper maximum distribution distance charged to 18,000 ft.
- Drop cost per foot reduced to \$.50

BCPM Results

Sprint Input Data

Nationwide average cost/line/month: \$29.14

Nationwide total Costs: \$57.1B

USF Support at:

\$20 Bench Mark \$15.1B

\$30 Bench Mark \$8.3 B

\$40 Bench Mark \$5.0 B

Proposed Workplan to Meet January 1, 1998 Implementation Date

- Adopt BCPM as Platform
- Address remaining issues
 - Switch costs
 - Input values for
 - cost of capital
 - depreciation
 - structure sharing
 - Low density areas
 - network quality
 - customer distribution

SPRINT PROPOSAL FOR USING PROXY MODEL RESULTS FOR USF

In its Recommended Decision, issued November 8, 1996, the Joint Board recommended the use of a proxy model for the purpose of determining USF costs. In recent weeks, public comments by the Commission have expressed dissatisfaction with the proxy models that have been placed on the public record, and have suggested that it is considering an interim USF plan that would not rely on proxy model results.

Sprint disagrees with that assessment of proxy models, at least in respect to the Benchmark Cost Proxy Model (BCPM) that is jointly sponsored by Sprint, US WEST, and Pacific Bell. The network design embedded in BCPM is technically sound, consistent with accepted engineering standards, and produces a network capable of providing the same high quality service in rural as well as in urban areas. Sprint urges the Commission to adopt the BCPM as the platform model for determining USF funding. Further, Sprint believes that although there remain several open issues (such as switching costs), these issues can be fully addressed and resolved prior to January 1, 1998, and that the Commission should focus its resources on resolving these issues rather than developing some alternative interim plan.

Following is Sprint's proposal for accomplishing that objective. First, Sprint recognizes and indeed shares the concerns expressed relative to the size of the USF fund implied by the BCPM results, using the default input values in that model. Based on its review of the criticisms of the BCPM inputs, a review of Sprint Local Telecom Division costs for some cost inputs, and input changes suggested by others (in particular, the Joint

Board Staff), Sprint has modified the inputs to BCPM to produce USF cost results that represent, on balance, a reasonable starting point for a proxy based USF fund.¹

Second, Sprint proposes a workplan to resolve what it believes to be the major outstanding issues relative to the BCPM model and model inputs, with a view to reaching final resolution of these issues prior to January 1, 1998.

This proposal, and the model input changes described below, represent the position of Sprint Corporation only, and not that of the other BCPM model sponsors.

SPRINT PROPOSED BCPM INPUT VALUES

The default input values in BCPM were derived from a survey of large LECs. The objective of the survey was to develop input values more representative of nationwide average costs than would be the case if the cosponsors of BCPM relied only on their own cost data. The BCPM results based on those default inputs, in particular the \$23 billion USF at a \$20 benchmark rate, have raised serious concerns as to the validity of those inputs.

Responding to these concerns, Sprint has independently reassessed the default input values, and has identified a number of changes that fall, in its view, within the range of reasonableness and would provide a reasonable basis for a national USF fund. Some of these input changes represent substitution of Sprint LTD costs for the default values in the

¹ Although Sprint believes the revised input changes are reasonable for USF purposes, it does not concede that all of the revisions are appropriate for determining the costs of unbundled elements. In particular, Sprint's experienced switch costs are considerably greater than the revised inputs, and Sprint retains the right to determine its unbundled switching rates based on Sprint specific costs.

model (for example, cable costs and Digital Loop Carrier(DLC) costs). Others represent input values suggested by the Joint Board Staff (for example, depreciation lives and structure sharing). Finally, Sprint recognizes that there is a fundamental disagreement on the level of switching costs, and that this issue can only be resolved by Commission access to and validation of cost data that is proprietary to switch vendors. Pending resolution of this matter, Sprint proposes that the lower switch costs incorporated in the BCM2 model be used. Although the current BCPM values more closely approximate Sprint's current costs of switching, Sprint believes that it would be appropriate for the Commission to use the more conservative input costs until it has concluded its own investigation of this issue.

Following is a summary of the input changes made by Sprint. A copy of the revised BCPM input tables is attached.

1. Cost of Capital has been revised to the Commission's currently prescribed 11.25%.²
2. Depreciation lives for switching, circuit equipment, and copper plant have been lengthened to 12, 10, and 18 years, respectively.²
3. Structure sharing has been revised to assign 66% of manholes and buried structure placement costs, and 50% of poles, to the incumbent LEC.
4. Copper and fiber material costs have been reduced by 20%. Based on a review of its own costs, Sprint has found that its costs are approximately 10% below

² Sprint recognizes that the cost of capital and depreciation life adjustments arguably violate the criteria that the model should represent the forward looking economic costs of a new entrant. However, given that the vast preponderance of USF will initially flow to incumbent LECs, Sprint believes it would not be inappropriate for the Commission to relax this criteria for the initial implementation of the new USF, and use instead inputs that more closely approximate regulatory prescribed capital costs and depreciation lives for ILECs.

the default costs in the model. In addition, Sprint believes a further adjustment of 10% is appropriate to reflect that the RBOCs and GTE should experience even lower costs due to the volume of their purchases.

5. Sprint likewise adjusted the costs for DLCs, Feeder Distribution Interfaces, and manholes consistent with Sprint's internal costs for these items.

REVISED BCPM RESULTS

The input modifications described above produce a nationwide average monthly cost per access line of \$29.14. At the \$20 benchmark level, this produces a USF fund of \$15.1 billion (a detailed output report is attached). Of this amount, approximately \$600 million is the USF costs for single line businesses, and \$14.5 billion for residential lines. USF costs at the \$30 benchmark are \$8.3 billion.

PROPOSED WORKPLAN FOR A JANUARY 1, 1998 IMPLEMENTATION DATE

The BCPM model input changes described above represent a reasonable starting point for initiating a proxy-based USF on January 1, 1998. However, Sprint believes that further refinements can and should be made prior to implementation. Although there are literally thousands of inputs to the BCPM, Sprint believes that the vast majority of those inputs are reasonable, and that efforts at further refining them will not materially affect the costs produced by the model. Rather, the Commission should focus its review and validation efforts on the following areas which constitute the major areas of concern expressed by independent parties and where changes in those inputs could materially affect the costs produced by the model.

Again, Sprint urges the Commission to adopt the BCPM as the basic platform for determining USF costs. To continue to simultaneously analyze fundamentally different models under various input assumptions will needlessly complicate the task of developing and implementing a USF fund by January 1, 1998. From a purely technical, network design standpoint, the BCPM is clearly superior to the other models that have been placed on the record. Sprint believes that the BCPM is not only fundamentally sound, but is also the only model that conforms to the criteria set forth by the Joint Board. In addition, the BCPM provides the ability to change the default inputs, so that the Commission is in no way constrained to the default input values in the model. Finally, the BCPM model itself is open and unprotected, making it not only easy to audit, but also providing the capability to modify any of the formulas or algorithms³. Thus, the Commission has total control over both the model and the model inputs, and can revise these where it finds it appropriate to do so.

Using the BCPM as a platform, the major issues that need to be addressed are the following:

1. Switching costs. As discussed above, there exists a fundamental disagreement concerning the costs of switching. This dispute is grounded in the unavailability of public data on the prices paid by LECs for switching equipment. This price data is proprietary to the switch vendors, and LECs are not permitted to divulge this data publicly. Sprint believes that the only means of resolving this

³ In this regard, Sprint believes it would be appropriate to modify the BCPM's treatment of operating expenses. The model currently assigns all operating expenses on a per access line basis. Sprint believes that allocating investment related expenses on investment would better reflect cost causation, and that the BCPM should be modified to reflect this method..

issue is for the Commission to review switch vendor proprietary data under protective cover, and use the results of that review to develop average or generic switch cost functions (masking the prices of individual switch vendors) for use in determining USF costs.

2. Rate of return, depreciation, and structure sharing. Outside of switching costs (discussed above) and network design for rural areas (discussed below), these three inputs are the predominant drivers of the cost differences between the Hatfield and BCPM models, and therefore warrant the greatest scrutiny by the Commission.
3. Low density areas. There are two issues relative to low density or rural areas that require further attention. First is the quality of service. The BCPM designs a network that provides the same level of service quality in rural areas as in urban areas. In contrast, the Hatfield model incorporates a network design that produces a systematically lower quality of service in rural areas, and, indeed, in some instances a network that simply would not work. Fundamentally, however, the appropriate quality of service in rural areas is a policy decision that must be made by the Commission and the Joint Board.

Second, the BCPM assumes a uniform distribution of customers in rural areas. In those areas where this is not the case (for example, if customers are clustered in small towns rather than uniformly distributed over the countryside)

the BCPM may overestimate the costs for those areas.⁴

Sprint is continuing to work on this issue by utilizing smaller geographic areas (such as Census Blocks) in order to better identify actual customer locations and thereby better estimate the costs of providing facilities to serve those customers. Although Sprint believes that improvements in determining the costs in very rural areas can be accomplished before January 1, 1998, it would also support a years delay in the adoption of a proxy based USF for small companies to ensure that they are not adversely impacted by the adoption of a model that does not adequately reflect the costs of service in rural areas.

CONCLUSION

It is critical that the Commission continue to pursue the implementation of a proxy based USF fund, at least for large LECs, effective January 1, 1998. It is equally critical that the Commission adopt a model and model inputs that not only reflect a network design capable of producing a high quality of service, but also incorporate a realistic assessment of the costs of building such a network. The BCPM model, with the input changes suggested by Sprint, meets these criteria. Sprint urges the Commission to adopt the BCPM platform and the Sprint input changes as a basis for implementing a proxy-based USF plan.

⁴ The Hatfield model doesn't resolve this issue. Although it attempts to recognize clustering, it not only presumes (erroneously) that all rural areas are clustered, but also "fixes" the problem by simply disregarding all customers living outside of the clusters, thereby significantly understating the costs in rural areas.

ATTACHMENT

Sprint Revised Input Values

Bcpm Misc Inputs

Miscellaneous Inputs
Cable & Wire Inputs

	FCC Filing	Sprint Run
CprMaxDistr	12,000	18,000
DropCostPerFoot	\$0.77	\$0.50
Cable Break Point	12000	15000

Material Costs

FCC Filing Copper Distribution Cost				Sprint Run Copper Distribution Cost		
Cable Size	Cost Underground	Cost Buried	Cost Aerial	Cost Underground	Cost Buried	Cost Aerial
3600	\$ 33.30	\$ 30.20	\$ 34.01	\$ 19.98	\$ 18.12	\$ 20.41
3000	\$ 28.21	\$ 29.19	\$ 33.36	\$ 19.25	\$ 17.51	\$ 20.02
2400	\$ 23.02	\$ 25.79	\$ 26.26	\$ 13.97	\$ 15.47	\$ 15.76
2100	\$ 19.50	\$ 22.56	\$ 20.88	\$ 13.60	\$ 14.46	\$ 12.53
1800	\$ 17.55	\$ 20.46	\$ 19.28	\$ 12.39	\$ 13.58	\$ 11.57
1200	\$ 12.07	\$ 13.20	\$ 12.78	\$ 8.12	\$ 9.25	\$ 7.67
900	\$ 9.40	\$ 10.70	\$ 9.86	\$ 6.77	\$ 7.26	\$ 6.26
600	\$ 7.52	\$ 7.27	\$ 7.21	\$ 5.17	\$ 5.78	\$ 4.69
400	\$ 6.55	\$ 5.67	\$ 5.58	\$ 4.01	\$ 4.60	\$ 3.60
300	\$ 4.42	\$ 4.38	\$ 4.88	\$ 3.59	\$ 4.06	\$ 3.20
200	\$ 3.60	\$ 3.49	\$ 3.84	\$ 3.16	\$ 3.62	\$ 2.81
100	\$ 2.65	\$ 2.52	\$ 2.99	\$ 2.49	\$ 2.99	\$ 2.14
50	\$ 2.42	\$ 2.16	\$ 2.59	\$ 2.21	\$ 2.77	\$ 2.14
25	\$ 1.51	\$ 1.93	\$ 2.50	\$ 2.11	\$ 2.67	\$ 2.01
18	\$ 1.32	\$ 1.75	\$ 2.18	\$ 0.79	\$ 1.05	\$ 1.31
12	\$ 1.16	\$ 1.28	\$ 1.92	\$ 0.70	\$ 2.68	\$ 2.00

FCC Filing CopperFeeder Cost				Sprint Run CopperFeeder Cost		
FeederCableSize	Cost Underground	Cost Buried	Cost Aerial	Cost Underground	Cost Buried	Cost Aerial
4200	\$ 35.60	\$ 33.16	\$ 37.18	\$ 21.36	\$ 19.90	\$ 22.31
3600	\$ 33.30	\$ 30.20	\$ 34.01	\$ 19.98	\$ 18.12	\$ 20.41
3000	\$ 28.21	\$ 29.19	\$ 33.36	\$ 19.25	\$ 17.51	\$ 20.02
2400	\$ 21.50	\$ 26.79	\$ 26.26	\$ 13.97	\$ 15.47	\$ 15.76
2100	\$ 19.49	\$ 22.60	\$ 20.88	\$ 13.60	\$ 14.46	\$ 12.53
1800	\$ 17.38	\$ 20.46	\$ 19.28	\$ 12.39	\$ 13.58	\$ 11.57
1200	\$ 11.95	\$ 13.20	\$ 12.78	\$ 8.12	\$ 9.25	\$ 7.67
900	\$ 9.98	\$ 10.70	\$ 9.86	\$ 6.77	\$ 7.26	\$ 6.26
600	\$ 7.52	\$ 7.27	\$ 7.21	\$ 5.17	\$ 5.78	\$ 4.69
400	\$ 6.55	\$ 5.67	\$ 5.58	\$ 4.01	\$ 4.60	\$ 3.60
300	\$ 4.42	\$ 4.38	\$ 4.88	\$ 3.59	\$ 4.06	\$ 3.20
200	\$ 3.60	\$ 3.49	\$ 3.84	\$ 3.16	\$ 3.62	\$ 2.81
100	\$ 2.65	\$ 2.52	\$ 2.99	\$ 2.49	\$ 2.99	\$ 2.14
50	\$ 1.19	\$ 2.16	\$ 2.59	\$ 2.21	\$ 2.77	\$ 2.14
25	\$ 1.00	\$ 1.93	\$ 2.50	\$ 2.11	\$ 2.67	\$ 2.01

Material Costs

FCC Filing Fiber Cost				Sprint Run Fiber Cost		
FiberCableSize	Cost Underground	Cost Buried	Cost Aerial	Cost Underground	Cost Buried	Cost Aerial
288	\$ 11.50	\$ 12.79	\$ 12.02	\$ 6.56	\$ 7.67	\$ 7.21
144	\$ 10.30	\$ 9.96	\$ 9.85	\$ 5.08	\$ 5.97	\$ 5.91
96	\$ 7.40	\$ 7.43	\$ 7.19	\$ 4.01	\$ 4.46	\$ 4.31
72	\$ 6.25	\$ 6.00	\$ 6.75	\$ 3.54	\$ 3.60	\$ 4.05
60	\$ 5.50	\$ 5.17	\$ 6.02	\$ 3.28	\$ 3.10	\$ 3.61
48	\$ 4.75	\$ 4.95	\$ 5.27	\$ 2.93	\$ 2.97	\$ 3.16
36	\$ 4.15	\$ 4.01	\$ 4.67	\$ 2.62	\$ 2.40	\$ 2.80
24	\$ 3.75	\$ 3.93	\$ 3.45	\$ 2.32	\$ 2.36	\$ 2.07
18	\$ 3.48	\$ 3.25	\$ 3.26	\$ 2.23	\$ 1.95	\$ 1.96
12	\$ 3.09	\$ 2.75	\$ 3.04	\$ 1.97	\$ 1.65	\$ 1.82

Feeder Distribution Interface Cost Table		
Size	FCC FilingTotal Cost	Sprint Run Total Cost
0	\$ 407.00	\$ 407.00
26	\$ 1,885.00	\$ 1,885.00
51	\$ 2,120.00	\$ 2,120.00
101	\$ 2,355.00	\$ 2,355.00
151	\$ 2,590.00	\$ 2,590.00
201	\$ 5,509.49	\$ 4,423.00
301	\$ 6,848.35	\$ 5,182.00
451	\$ 7,586.00	\$ 5,974.00
601	\$ 8,717.30	\$ 7,028.00
901	\$ 11,489.93	\$ 7,507.00
1351	\$ 11,712.81	\$ 9,038.00
1801	\$ 17,222.30	\$ 13,461.00
2101	\$ 18,561.15	\$ 14,220.00
2251	\$ 19,298.81	\$ 15,012.00
2401	\$ 20,430.11	\$ 16,066.00
2701	\$ 23,202.74	\$ 16,545.00
3150	\$ 23,425.62	\$ 18,076.00

Material Costs

Digital Carrier Cost Table

Cost for Digital Loop Carrier				
Dlc Fiber Size	FCC Filing Fixed Cost	FCC Filing Per Line Cost	Sprint Run Fixed Cost	Sprint Run Per Line Cost
0	\$ 38,867.00	\$ 92.81	\$ 10,395.00	\$ 250.00
49	\$ 53,577.00	\$ 92.81	\$ 11,475.00	\$ 250.00
121	\$ 84,976.00	\$ 92.81	\$ 14,175.00	\$ 250.00
241	\$ 92,147.00	\$ 92.81	\$ 92,147.00	\$ 92.81
673	\$ 125,120.85	\$ 92.81	\$ 125,120.85	\$ 92.81
1335	\$ 217,267.85	\$ 92.81	\$ 217,267.85	\$ 92.81

CO Switch Cost Table

Company Size	FCC Filing Fixed/Startup \$	FCC Filing Per Line \$	FCC Filing Power and Common Equipment %	Fcc Filing Telco Install and Engineering %	Sprint Run Fixed/Startup \$	Sprint Run Per Line \$	Sprint Run Power and Common Equipment %	Sprint Run/Telco Install and Engineering %
S	\$ 261,871.00	\$ 225.00	6.82%	5.77%	\$ 150,000.00	\$ 110.00	6.82%	5.77%
M	\$ 261,871.00	\$ 225.00	6.82%	5.77%	\$ 150,000.00	\$ 110.00	6.82%	5.77%
L	\$ 261,871.00	\$ 225.00	6.82%	5.77%	\$ 150,000.00	\$ 110.00	6.82%	5.77%

Conduit Manhole Table

Conduit Manhole Table				FCC Filing		Sprint Run			
% Assigned Telephone	Cost of installed facility assigned telephone			% Assigned Telephone	Cost of installed facility assigned telephone				
	Normal	Soft Rock	Hard Rock		Normal	Soft Rock	Hard Rock		
75%	\$ 1,008.00	\$ 1,158.00	\$1,308.00	66%	\$ 887.04	\$ 1,019.04	\$1,151.04		
90%	\$ 3,404.93	\$ 3,764.93	\$4,124.93	66%	\$ 2,496.95	\$ 2,760.95	\$3,024.95		
80%	\$ 4,512.00	\$ 4,832.00	\$5,152.00	66%	\$ 3,722.40	\$ 3,986.40	\$4,250.40		
80%	\$ 2,640.00	\$ 2,800.00	\$2,960.00	66%	\$ 2,178.00	\$ 2,310.00	\$2,442.00		
100%	\$ 0.83	NA	NA	100%	\$ 0.83	NA	NA		

Structure

Under Ground Structure

Density Group 0-10

[illegible]

Density Group 11-50

	Normal Feeder	Normal Feeder	Normal Distribution	Normal Distribution	Soft Rock Feeder	Soft Rock Feeder	Soft Rock Distribution	Soft Rock Distribution	Hard Rock Feeder	Hard Rock Feeder	Hard Rock Distribution	Hard Rock Distribution
	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone
Conduit Installation	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%
Trench & Backfill	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%
Rocky Trench	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%
Backhoe Trench	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%
Hand Dig Trench	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%
Boring	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%
Cut & Restore Asphalt	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%
Cut & Restore Concrete	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%
Cut & Restore Sod	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%

Density Group 51-150

	Normal Feeder	Normal Feeder	Normal Distribution	Normal Distribution	Soft Rock Feeder	Soft Rock Feeder	Soft Rock Distribution	Soft Rock Distribution	Hard Rock Feeder	Hard Rock Feeder	Hard Rock Distribution	Hard Rock Distribution
	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone
Conduit Installation	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%
Trench & Backfill	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%
Rocky Trench	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%
Backhoe Trench	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%
Hand Dig Trench	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%
Boring	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%
Cut & Restore Asphalt	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%
Cut & Restore Concrete	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%
Cut & Restore Sod	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%

Structure

Buried Structure

Density Group 0-10

	Normal Feeder	Normal Feeder	Normal Distribution	Normal Distribution	Soft Rock Feeder	Soft Rock Feeder	Soft Rock Distribution	Soft Rock Distribution	Hard Rock Feeder	Hard Rock Feeder	Hard Rock Distribution	Hard Rock Distribution
Buried Cable Installation	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone
Plow	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Rocky Plow	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Trench & Backfill	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%
Rocky Trench	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%
Backhoe Trench	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%
Hand Dig Trench	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%
Bore Cable	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%
Push Pipe & Pull Cable	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%
Cut & Restore Asphalt	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%
Cut & Restore Concrete	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%
Cut & Restore Sod	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%	100.00%	66.00%

Density Group 11-50

	Normal Feeder	Normal Feeder	Normal Distribution	Normal Distribution	Soft Rock Feeder	Soft Rock Feeder	Soft Rock Distribution	Soft Rock Distribution	Hard Rock Feeder	Hard Rock Feeder	Hard Rock Distribution	Hard Rock Distribution
Buried Cable Installation	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone
Plow	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Rocky Plow	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Trench & Backfill	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%
Rocky Trench	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%
Backhoe Trench	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%
Hand Dig Trench	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%
Bore Cable	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%
Push Pipe & Pull Cable	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%
Cut & Restore Asphalt	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%
Cut & Restore Concrete	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%
Cut & Restore Sod	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%	97.50%	66.00%	95.00%	66.00%

Structure

Density Group 51-150

	Normal Feeder	Normal Feeder	Normal Distribution	Normal Distribution	Soft Rock Feeder	Soft Rock Feeder	Soft Rock Distribution	Soft Rock Distribution	Hard Rock Feeder	Hard Rock Feeder	Hard Rock Distribution	Hard Rock Distribution
Buried Cable Installation	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone
Plow	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Rocky Plow	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Trench & Backfill	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%
Rocky Trench	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%
Backhoe Trench	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%
Hand Dig Trench	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%
Bore Cable	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%
Push Pipe & Pull Cable	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%
Cut & Restore Asphalt	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%
Cut & Restore Concrete	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%
Cut & Restore Sod	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%	95.00%	66.00%	90.00%	66.00%

Density Group 151-500

	Normal Feeder	Normal Feeder	Normal Distribution	Normal Distribution	Soft Rock Feeder	Soft Rock Feeder	Soft Rock Distribution	Soft Rock Distribution	Hard Rock Feeder	Hard Rock Feeder	Hard Rock Distribution	Hard Rock Distribution
Buried Cable Installation	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone
Plow	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Rocky Plow	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Trench & Backfill	92.50%	66.00%	80.00%	66.00%	92.50%	66.00%	80.00%	66.00%	92.50%	66.00%	80.00%	66.00%
Rocky Trench	92.50%	66.00%	80.00%	66.00%	92.50%	66.00%	80.00%	66.00%	92.50%	66.00%	80.00%	66.00%
Backhoe Trench	92.50%	66.00%	80.00%	66.00%	92.50%	66.00%	80.00%	66.00%	92.50%	66.00%	80.00%	66.00%
Hand Dig Trench	92.50%	66.00%	80.00%	66.00%	92.50%	66.00%	80.00%	66.00%	92.50%	66.00%	80.00%	66.00%
Bore Cable	92.50%	66.00%	80.00%	66.00%	92.50%	66.00%	80.00%	66.00%	92.50%	66.00%	80.00%	66.00%
Push Pipe & Pull Cable	92.50%	66.00%	80.00%	66.00%	92.50%	66.00%	80.00%	66.00%	92.50%	66.00%	80.00%	66.00%
Cut & Restore Asphalt	92.50%	66.00%	80.00%	66.00%	92.50%	66.00%	80.00%	66.00%	92.50%	66.00%	80.00%	66.00%
Cut & Restore Concrete	92.50%	66.00%	80.00%	66.00%	92.50%	66.00%	80.00%	66.00%	92.50%	66.00%	80.00%	66.00%
Cut & Restore Sod	92.50%	66.00%	80.00%	66.00%	92.50%	66.00%	80.00%	66.00%	92.50%	66.00%	80.00%	66.00%

Structure

Density Group 501-2000

	Normal Feeder	Normal Feeder	Normal Distribution	Normal Distribution	Soft Rock Feeder	Soft Rock Feeder	Soft Rock Distribution	Soft Rock Distribution	Hard Rock Feeder	Hard Rock Feeder	Hard Rock Distribution	Hard Rock Distribution
Buried Cable Installation	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone
Plow	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Rocky Plow	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Trench & Backfill	90.00%	66.00%	80.00%	66.00%	90.00%	66.00%	80.00%	66.00%	90.00%	66.00%	80.00%	66.00%
Rocky Trench	90.00%	66.00%	80.00%	66.00%	90.00%	66.00%	80.00%	66.00%	90.00%	66.00%	80.00%	66.00%
Backhoe Trench	90.00%	66.00%	80.00%	66.00%	90.00%	66.00%	80.00%	66.00%	90.00%	66.00%	80.00%	66.00%
Hand Dig Trench	90.00%	66.00%	80.00%	66.00%	90.00%	66.00%	80.00%	66.00%	90.00%	66.00%	80.00%	66.00%
Bore Cable	90.00%	66.00%	80.00%	66.00%	90.00%	66.00%	80.00%	66.00%	90.00%	66.00%	80.00%	66.00%
Push Pipe & Pull Cable	90.00%	66.00%	80.00%	66.00%	90.00%	66.00%	80.00%	66.00%	90.00%	66.00%	80.00%	66.00%
Cut & Restore Asphalt	90.00%	66.00%	80.00%	66.00%	90.00%	66.00%	80.00%	66.00%	90.00%	66.00%	80.00%	66.00%
Cut & Restore Concrete	90.00%	66.00%	80.00%	66.00%	90.00%	66.00%	80.00%	66.00%	90.00%	66.00%	80.00%	66.00%
Cut & Restore Sod	90.00%	66.00%	80.00%	66.00%	90.00%	66.00%	80.00%	66.00%	90.00%	66.00%	80.00%	66.00%

Density Group > 2001

	Normal Feeder	Normal Feeder	Normal Distribution	Normal Distribution	Soft Rock Feeder	Soft Rock Feeder	Soft Rock Distribution	Soft Rock Distribution	Hard Rock Feeder	Hard Rock Feeder	Hard Rock Distribution	Hard Rock Distribution
Buried Cable Installation	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone	FCC Filing % Assigned Telephone	Sprint Run % Assigned Telephone
Plow	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Rocky Plow	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Trench & Backfill	85.00%	66.00%	80.00%	66.00%	85.00%	66.00%	80.00%	66.00%	85.00%	66.00%	80.00%	66.00%
Rocky Trench	85.00%	66.00%	80.00%	66.00%	85.00%	66.00%	80.00%	66.00%	85.00%	66.00%	80.00%	66.00%
Backhoe Trench	85.00%	66.00%	80.00%	66.00%	85.00%	66.00%	80.00%	66.00%	85.00%	66.00%	80.00%	66.00%
Hand Dig Trench	85.00%	66.00%	80.00%	66.00%	85.00%	66.00%	80.00%	66.00%	85.00%	66.00%	80.00%	66.00%
Bore Cable	85.00%	66.00%	80.00%	66.00%	85.00%	66.00%	80.00%	66.00%	85.00%	66.00%	80.00%	66.00%
Push Pipe & Pull Cable	85.00%	66.00%	80.00%	66.00%	85.00%	66.00%	80.00%	66.00%	85.00%	66.00%	80.00%	66.00%
Cut & Restore Asphalt	85.00%	66.00%	80.00%	66.00%	85.00%	66.00%	80.00%	66.00%	85.00%	66.00%	80.00%	66.00%
Cut & Restore Concrete	85.00%	66.00%	80.00%	66.00%	85.00%	66.00%	80.00%	66.00%	85.00%	66.00%	80.00%	66.00%
Cut & Restore Sod	85.00%	66.00%	80.00%	66.00%	85.00%	66.00%	80.00%	66.00%	85.00%	66.00%	80.00%	66.00%

Cost - Expense

Financial Data	FCC Filing	Sprint Run
Return on Equity	13.1%	12.9%
Debt Rate	7.8%	7.8%
Debt Ratio	32.8%	32.8%
Discount Rate	7.8%	7.8%
Return on Capital	11.4%	11.25%

Account	FCC Filing Economic Life (years)	Sprint Run Economic Life (years)
Switching	10	12
Circuit/DLC	8.5	10
Aerial Copper	12.5	18
Underground Copper	11.5	18
Buried Copper	14	18

ATTACHMENT

BCPM National Results Using
Sprint Input Values

Benchmark Cost Proxy Model Results

Key Elements

National Multiple States [50]

Analysis	Total	Per Line
CBG Lines Served	163,226,155	
Average Distribution Length	475,057,101,947	2,910
Average Feeder Length	2,344,339,961,299	14,363
Average Loop Length	2,819,397,063,247	17,273
Distribution Investment	\$ 112,471,958,816	\$ 689
Feeder Investment	\$ 42,158,659,480	\$ 258
Loop Investment (Uncapped)	\$ 154,630,618,297	\$ 947
Loop Investment (Capped)	\$ 153,978,156,753	\$ 943

Plant Type	Capped Annual Investment	Percentage	Annual Per Line Investment
Motor Vehicle	\$ 1,285,867,387	0.70%	\$ 7.88
Special Purpose Vehicle	\$ 1,740,010	0.00%	\$ 0.01
Garage Work	\$ 55,680,320	0.03%	\$ 0.34
Other Work	\$ 1,090,986,267	0.59%	\$ 6.68
Furniture	\$ 405,422,329	0.22%	\$ 2.48
Office	\$ 1,219,747,007	0.66%	\$ 7.47
General Purpose Computers	\$ 5,159,129,636	2.79%	\$ 31.61
Total Support Investment	\$ 9,218,572,956	4.98%	\$ 56.48
Land	\$ 234,536,891	0.13%	\$ 1.44
Building	\$ 1,479,386,557	0.80%	\$ 9.06
Switching Equipment	\$ 19,462,027,480	10.52%	\$ 119.23
Circuit Equipment	\$ 25,805,685,953	13.95%	\$ 158.10
Buried Cable	\$ 58,980,732,665	31.89%	\$ 361.34
Aerial Cable	\$ 17,835,497,263	9.64%	\$ 109.27
Underground Cable	\$ 21,124,164,088	11.42%	\$ 129.42
Pole Investment	\$ 11,158,475,141	6.03%	\$ 68.36
Conduit Investment	\$ 19,634,416,951	10.62%	\$ 120.29
Total Plant Investment	\$ 175,714,922,988	95.02%	\$ 1,076.51
Total Investment	\$ 184,933,495,943	100.00%	\$ 1,132.99

Assumptions:

SPRINTDISCOUNTBASE.CSV, CapcostSprintDiscount.inf

BCPMSprint.xls

USF with Sprint Discounted Cable Prices (0% discount applied)